

Response to Official Action
Application No. 10/827,510
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Amendments to the Drawings:

No amendments are made to the Drawings herein.

REMARKS

By the foregoing Amendment, Claims 14 and 19 are amended and Claim 20 is cancelled. Entry of the Amendment, and favorable consideration thereof is earnestly requested.

Claims 14-17 stand rejected under 35 U.S.C. §102(e) as being anticipated by Pillar (U.S. Patent No. 6,553,290), while Claims 1-13 and 18-30 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Pillar in view of Pillar et al. (U.S. Patent Application Publication No. US 2004/0002794 A1). Applicant respectfully asks the Examiner to reconsider these rejections in view of the above Amendments and the below Remarks.

The present invention is directed to a control system for controlling a primary electronically controlled vehicle system, which also controls at least one additional auxiliary vehicle system. However, the control system controls the auxiliary vehicle system only at certain times when such does not interfere with control of the primary vehicle system. Such a configuration allows for several vehicle systems to be controlled by a single control unit, while avoiding the problems that exist when a single control system controls multiple vehicle systems at all times, particularly if the control unit is primarily responsible for controlling a critical system. For example, while it may be desirable for the control unit of an electronic braking system to also control one or more auxiliary vehicle systems, such may, at times, interfere with the control unit's primary responsibility of controlling the brake system. As such, at those times when such an interference may occur, it would be desirable for the control unit of the braking system to cease controlling such auxiliary systems.

Thus, Claims 7, 14 (as amended) and 25 require, among other limitations, a control unit which controls a component of a first electronically controlled vehicle system at all times and which controls a component of a second electronically controlled vehicle system only while certain conditions are determined to exist.

Claims 1 and 21 are similar to Claims 7, 14 and 25, but recite the specific "certain conditions" (i.e., the vehicle being stationary). Thus, Claims 1 and 21 require, among other limitations, a control unit which controls operation of a component of a first electronically controlled vehicle system while the vehicle is moving and while the vehicle is stationary (i.e., "at all times"), and which controls operation of a component of a second electronically controlled vehicle system only while the vehicle is stationary (i.e., "only while certain conditions are determined to exist").

Applicant respectfully submits that neither prior art reference cited by the Examiner discloses, teaches or suggests the above-highlighted limitations of all claims.

Pillar discloses a vehicle having a number of control units 24, 26, 28, 30 for controlling a number of electronically controlled vehicle systems 34, 36, 38, 40. The vehicle also includes an intelligent display module 14 which includes a test control module 15 for diagnosing subsystem faults, for displaying fault information, for maintaining vehicle maintenance records, and for performing data logging for system diagnosis and/or for accident reconstruction. While the intelligent display module 14 is in communication with the control units 24, 26, 28, 30 so as to retrieve data therefrom, the intelligent display module 14 does not control operation of any components of any electrically controlled vehicle system 34, 36, 38, 40. It is only control units 24, 26, 28, 30 which control operation of components of the electrically controlled vehicle system 34, 36, 38, 40 with respect to which each is associated.

Applicant concedes that each control unit 24, 26, 28, 30 controls operation of components of the electrically controlled vehicle system 34, 36, 38, 40 with which it is associated “at all times” and “while the vehicle is moving and while the vehicle is stationary”. Thus, central tire inflation control system 24 controls operation of components of central tire inflation system 34 at all times, anti-lock brake control system 26 controls operation of components of anti-lock brake system 36 at all times, transmission control system 28 controls operation of components of transmission 38 at all times, and engine control system 30 controls operation of components of engine 40 at all times. However, Applicant respectfully submits that none of control units 24, 26, 28, 30 controls a component of a second electronically controlled vehicle system at any time, and certainly not only while certain conditions are determined to exist and/or only while the vehicle is stationary. For example, anti-lock brake control system 26 controls components of anti-lock brake system 36 at all times, but never controls components of central tire inflation system 34, components of transmission 38, or components of engine 40. Thus, it clearly cannot be said that anti-lock brake control system 26 controls components of central tire inflation system 34, components of transmission 38, or components of engine 40 only while certain conditions are determined to exist and/or only while the vehicle is stationary, as is required by all claims, as amended.

In a first embodiment (as shown in Figure 1), Pillar et al. discloses a vehicle having a number of control units 91, 94, 95 for controlling a number of electronically controlled vehicle systems 92, 93, 96. The vehicle also includes a central control unit 14 which received input from various input devices 40 and controls various output devices 50. While the central control unit 14 is in communication with the control units 91, 94, 95 so as to retrieve data therefrom,

the central control unit 14 does not control operation of any components of any electrically controlled vehicle system 92, 93, 96. It is only control units 91, 94, 95 which control operation of components of the electrically controlled vehicle system 92, 93, 96 with respect to which each is associated.

In a second embodiment (as shown in Figure 23), Pillar et al. discloses a vehicle having a number of control units 224, 226, 228, 230 for controlling a number of electronically controlled vehicle systems 234, 236, 238, 240. The vehicle also includes an intelligent display module 214 which includes a test control module 215 for diagnosing subsystem faults, for displaying fault information, for maintaining vehicle maintenance records, and for performing data logging for system diagnosis and/or for accident reconstruction. While the intelligent display module 214 is in communication with the control units 224, 226, 228, 230 so as to retrieve data therefrom, the intelligent display module 214 does not control operation of any components of any electrically controlled vehicle system 234, 236, 238, 240. It is only control units 224, 226, 228, 230 which control operation of components of the electrically controlled vehicle system 234, 236, 238, 240 with respect to which each is associated.

With respect to both embodiments, Applicant concedes that each control unit 91, 94, 95, 224, 226, 228, 230 controls operation of components of the electrically controlled vehicle system 92, 93, 96, 234, 236, 238, 240 with which it is associated "at all times" and "while the vehicle is moving and while the vehicle is stationary". Thus, engine control system 91 controls operation of components of engine 92 at all times, transmission control system 94 controls operation of components of transmission 93 at all times, anti-lock brake control system 95 controls operation of components of anti-lock brake system 96 at all times, central tire inflation control system 224 controls operation of components of central tire

inflation system 234 at all times, anti-lock brake control system 226 controls operation of components of anti-lock brake system 236 at all times, transmission control system 228 controls operation of components of transmission 238 at all times, and engine control system 230 controls operation of components of engine 240 at all times. However, Applicant respectfully submits that none of control units 91, 94, 95, 224, 226, 228, 230 controls a component of a second electronically controlled vehicle system at any time, and certainly not only while certain conditions are determined to exist and/or only while the vehicle is stationary. For example, anti-lock brake control system 226 controls components of anti-lock brake system 236 at all times, but never controls components of central tire inflation system 234, components of transmission 238, or components of engine 240. Thus, it clearly cannot be said that anti-lock brake control system 226 controls components of central tire inflation system 234, components of transmission 38, or components of engine 240 only while certain conditions are determined to exist and/or only while the vehicle is stationary, as is required by all claims, as amended.

In view of the above, Applicant respectfully submits that neither Pillar nor Pillar et al. can anticipate any claim, as amended, of the present application. Moreover, Applicant respectfully submits that neither Pillar nor Pillar et al., either taken alone or in combination, would render the present invention, as claimed, obvious.

It is well settled that the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination or modification. *In re Mills*, 916 F.2d 680, 16 U.S.P.Q.2d 1430 (Fed. Cir. 1990). In the present case, Applicant respectfully submits that neither Pillar nor Pillar et al. discloses, teaches or

suggests in any way a control unit which controls operation of a component of a first electronically controlled vehicle system *while the vehicle is moving and while the vehicle is stationary*, and which also controls operation of a component of a second electronically controlled vehicle system only while the vehicle is stationary (as is required by Claims 1 and 21). Applicant also respectfully submits that neither Pillar nor Pillar et al. discloses, teaches or suggests in any way a control unit which controls a component of a first electronically controlled vehicle system *at all times* and which also controls a component of a second electronically controlled vehicle system only while certain conditions are determined to exist (as is required by Claims 7, 14 and 25). Neither does Pillar or Pillar et al., either alone or in combination, suggest the desirability of a system possessing the above-highlighted elements. As such, even if Pillar and Pillar et al. were combined as suggested by the examiner, the hypothetical system resulting from the combination would not possess or fairly suggest the present invention, as claimed.

For the foregoing reasons, Applicant respectfully submits that all pending claims, namely Claims 1-19 and 21-30, are patentable over the references of record, and earnestly solicits allowance of the same.

Respectfully submitted,



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